

Serial No. 09/020,716
Group Art Unit: 1638

REMARKS/ARGUMENTS

Reconsideration of the present application is respectfully requested.

The specification has been amended to replace US Ser. Nos. with US Pat. Nos. and to comply with the Examiner's request to indicate how each of SEQ ID NOS: 14-22 are supported by the cited references.

In view of this amendment and the amendment mailed on November 9, 2000 it is believed that the claims are in condition for allowance.

Attached hereto is a marked-up version of the changes made to the specification by the current amendment. The attached page is captioned "Version with markings to show changes made."

Respectfully submitted, ,

Marianne H. Michel

Marianne H. Michel
Attorney for Applicant(s)
Registration No. 35,286

PIONEER HI-BRED INTERNATIONAL, INC.
Corporate Intellectual Property
7100 N.W. 62nd Avenue
P.O. Box 1000
Johnston, Iowa 50131-1000
Phone: (515) 334-4467
Facsimile: (515) 334-6883

Serial No. 09/020,716
Group Art Unit: 1638

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Specification

Paragraph beginning at line 6 of page 9 has been amended as follows:

Modified hordothionin proteins are described in U.S. Pat. No. 5,990,389 issued November 23, 1999; Ser. Nos. 08/838,763 filed April 10, 1997; U.S. Pat. No. 5,885,801 issued March 23, 1999; 08/824,379 filed March 26, 1997; U.S. Ser. No. 08/824,382 filed March 26, 1997; and U.S. Pat. No. 5,703,409 issued December 30, 1997 the disclosures of which are incorporated herein in their entirety by reference.

Paragraph beginning at line 1 of page 12 has been amended as follows:

Many other proteins are also appropriate, for example the protein encoded by the structural gene can be a lysine and/or sulfur rich seed protein, such as the soybean 2S albumin described in U.S. Pat. No. 5,850,016 issued December 15, 1998, Ser. No. 08/618,911 filed March 20, 1996, and the chymotrypsin inhibitor from barley, Williamson *et al.*, Eur. J Biochem 165:99-106 (1987), the disclosures of each are incorporated by reference.

Paragraph beginning at line 6 of page 12 has been amended as follows:

Derivatives of these genes can be made by site directed mutagenesis to increase the level of preselected amino acids in the encoded polypeptide. For example the gene encoding for the barley high lysine polypeptide (BHL), is derived from barley chymotrypsin inhibitor, U.S. Ser. No. 08/740,682 filed November 1, 1996 and PCT/US97/20441 filed October 31, 1997, the disclosures of each are incorporated herein by reference. The gene encoding for the enhanced soybean albumin gene (ESA), is derived from soybean 2S albumin described in U.S. Pat. No. 5,850,016 Ser.

Serial No. 09/020,716
Group Art Unit: 1638

~~No. 08/618,911~~, the disclosure of which is incorporated herein in its entirety by reference.

Paragraph beginning at line 15 of page 12 has been amended as follows:

Other examples of sulfur-rich plant proteins within the scope of the invention include plant proteins enriched in cysteine but not methionine, such as the wheat endosperm purothionine (Mak and Jones; Can. J. Biochem.; Vol. 22; p. 83J; (1976) SEQ ID NO: 22; incorporated herein in its entirety by reference), the pea low molecular weight albumins (Higgins, *et al.*; J. Biol. Chem.; Vol. 261; p. 11124; (1986) SEQ ID NOS: 14-15; incorporated herein in its entirety by reference) as well as 2S albumin genes from other organisms. See, for example, Coulter, *et al.*; J. Exp. Bot.; Vol. 41; p. 1541; (1990); incorporated herein in its entirety by reference.

Paragraph beginning at line 1 of page 13 has been amended as follows:

Such proteins also include methionine-rich plant proteins such as from sunflower seed (Lilley, *et al.*; In: Proceedings of the World Congress on Vegetable Protein Utilization in Human Foods and Animal Feedstuffs; Applewhite, H. (ed.); American Oil Chemists Soc.; Champaign, IL; pp. 497-502; (1989); incorporated herein in its entirety by reference), corn (Pedersen, *et al.*; J. Biol. Chem. p. 261; p. 6279; (1986) SEQ ID NOS: 16-17; Kiriara, *et al.*; Gene, Vol. 71; p. 359; (1988) SEQ ID NOS: 18-19; both incorporated herein in its entirety by reference), and rice (Musumura, *et al.*; Plant Mol. Biol.; Vol. 12; p. 123; (1989) SEQ ID NOS: 20-21; incorporated herein in its entirety by reference).